



# Spark Gap

Vol. 35, Issue 8, August 2018 *MARC - Serving Central Indiana Communities for thirty-five years*

## ***On Our MARC:***

Where did the time go? MARC has a few events for the year. Heartnut Sept. 8th, Gblin Patrol Oct 31st and most important, MARC annual picnic Sept 15th!!

Speaking of the picnic, it is a great family event. Again this year we will be headed to Steve Brown's, N9LC, home in Franklin. Steve and his wife have graciously welcomed us for another year and the location couldn't be any better. Hopefully the weather will be just as nice. Your admission is a covered dish or another item to share and a lawn chair to "sit a spell." The club will provide the meat, Ice tea and Lemonade. See all of you there!

It's not too late to throw your hat into the ring for an officer's position in the MARC for the 2018-19 year. If you hold a valid Amateur Radio license and your dues are current, full member of the club, you can run for President, Vice President, Secretary or Treasurer. If you wish to run or would like to nominate someone else for a position, please contact Rhonda Curtis at [secretary@midstatehams.org](mailto:secretary@midstatehams.org). Before nominating someone, please check with them to see if they are interested in an office. The slate will be finalized at the meeting on Aug. 18th with balloting up until the annual picnic on Sept. 15th. Once the slate is finalize, Rhonda will email out all ballots to paid members and if we don't have an email address, she will mail you one.

Hope to see you on Saturday. The coffee will be on.

Jacki - K16QOG

President

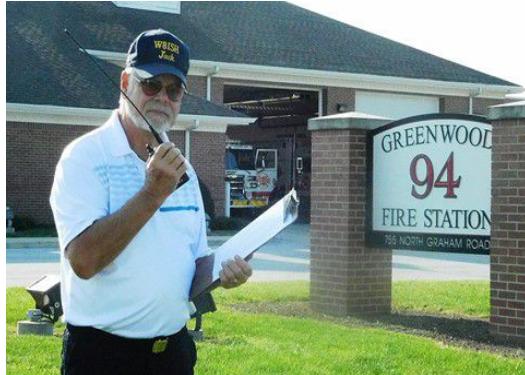




*Birthdays for the month of August:*

**K9JGB-Grant Black**

**N9CHY-Cy Young**



Jack W8ISH, Greenwood

## **ARES TEST STORY 8/12/2018**

What began as a simple simplex radio exercise quickly turned into a scramble to make radio contact with low powered portable stations around the county. The August 11<sup>th</sup> ARES communication test is seen as a major success even though many stations could not hear or contact Bob-N9SIU via portable or low power mobile stations from around the county.

The 90-minute exercise began shortly before 9am as Jack-W8ISH established Net Control via our club repeater. There were twenty-three check-ins from as far north as Indianapolis, east to the Boggstown, west to Center Grove and down to Johnson county park. The Indy check-ins came from the intersection of Kessler and Keystone, Clermont and Acton.

After a brisk thirty minute repeater Net, Bob N9SIU, switched everyone to 146.550 simplex. This is a frequency often used for club public service events. Running 10 watts mobile from the Greenwood Park Mall, Bob worked his way down the established check-ins for the next hour. We quickly discovered that the Mall parking lot was a bad spot for reliable communications. Bob tried another spot nearby so he could better communicate with the county wide units. Several units reported moving to another spot to better hear Net Control. Meanwhile, Jack was busy monitoring both frequencies and communicating via the repeater to mobile stations that reported poor or no contact with N9SIU.

In contrast, Jack-W8ISH was able to communicate with all stations through the repeater and simplex by using a 10 watt mobile attached to a portable high gain antenna at 15 feet on a mast. Those stations near the Johnson county park were readable on simplex at his location but had a little white noise.

The Nets were secured at 1015 hours. Lessons learned: It helps to have HT batteries fully charged and use a higher gain antenna on the HT or mobile. A five watt HT will not be reliable across the 20 mile expanse of Johnson county. Even mobile stations with a mag mount needed to increase power from 10 watts to 30 watts or more to communicate.

Thanks to the nearly two dozen club members and out of county stations for participating. Our primary objective to re-program our radios for simplex if needed was an outstanding success. By plotting everyone's location and power output we now have a better idea of dead spots around the county. Stay tuned for the next Johnson county ARES exercise.

.....Jack-w8ish

In Action Selfies:



Bill KM6CRL, Park Mobile



Steve K9DY, Porch Operation



Jim K9RJB, with a good antenna.



Dave KD9KZS, Old Town Park Greenwood

## Get your free copy of *A Field Guide to Simple HF Dipoles*

by Dan Romanchik, KB6NU

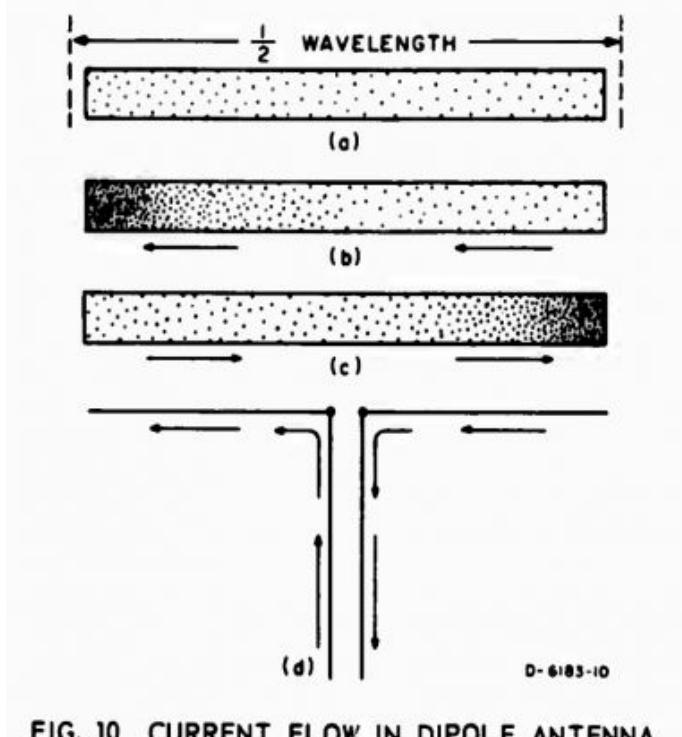
A link to *A Field Guide to Simple HF Dipoles* ([http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2/GetTRDoc.pdf](http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2/GetTRDoc.pdf&docID=2&GetTRDoc.pdf)) was posted to reddit recently, and I liked this document so much that I thought I would share it with you. It was originally written for the military, but is now available for free from the Defense Technical Information Center.

The preface to this document reads:

“Under project Agile, Stanford Research Institute has supplied several teams to assist operating personnel in improving the performance of field radio networks. In this work, it has been observed that U.S. military and civilian antenna manuals often contain misleading information regarding the operation of field antennas and tend to be overly complex. Consequently, this guide has been prepared to assist in training personnel concerned with the construction of simple HF antennas in the field.”

I must say that *A Field Guide to Simple HF Dipoles* does this very well. It not only explains how dipole antennas work, it also does a very good job of describing the basics of radio waves and propagation. And it does this without getting overly technical.

For example, below is Figure 10. It’s used to describe current flow in a dipole antenna.



**FIG. 10 CURRENT FLOW IN DIPOLE ANTENNA**

The *Field Guide* reads:

“Electric current in a conductor consists of the flow of small particles called electrons. Figure 10(a) represents a dipole with electrons in it. When the transmitter is turned off, the electrons distribute themselves evenly throughout the dipole, as shown. All electrons repel each other and try to get as far from each other as possible; that is how they achieve the

uniform distribution show in Figure 10(a). When the transmitter is turned on, the electrons flow back and forth from end to end as shown in Figures 10(b) and 10(c). First the electrons flow to the left and crowded at one end as shown in Figure 10(b). Second, since the electrons repel each other, the push off to the right and get crowded together at the other end, as in Figure 10(c).”

It then uses this description to talk about voltage and current distribution along a dipole antenna:

“The difference between voltage (volts) and current (amperes) in a dipole is also illustrated by Figs. 10(b) and 10(c). You can see that the maximum flow of current is going to be in the middle of the dipole. An observer at the center of the dipole would see the electrons rush past, first one way and then the other. The center is the maximum current point. Very little current flows near the end of the dipole; in fact, at the extreme ends there is no current at all for there is no place for it to go. However, at the ends of the dipole, there is a great change of voltage; when the electrons are densely packed, this represents a negative voltages, and when there is a scarcity of electrons, it represents a positive voltage. Thus you can see that the voltage at each end swings alternately positive and negative. An end of the dipole is a maximum voltage point.”

A Field Guide to Simple HF Dipoles is packed with all kinds of goodies like this. Download it (<http://www.dtic.mil/dtic/tr/fulltext/u2/684938.pdf>) right now.

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When he's not building dipoles or teaching ham radio classes, Dan blogs about amateur radio, writes exam study guides ([www.kb6nu.com/study-guides](http://www.kb6nu.com/study-guides)), and operates CW on the HF bands. Look for him on 30m, 40m, and 80m. You can email him about your experiences with simple HF dipoles at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).

## **Johnson Space Center Amateur Radio Club Fires Up 1950s Vintage Gear for NASA on the Air Special Event**

W5RRR, the Johnson Space Center Amateur Radio Club (JSCARC), is on the air as part of the NASA on the Air (NOTA) year-long special event — one of 12 NASA ham club stations participating in the event, which celebrates significant NASA milestones as the agency observes its 60th anniversary.

This week, JSCARC members will focus operations on 80, 40, 20, 15, and 10 meters, as well as on satellites. A commemorative 1958 vintage vacuum tube vintage station will be activated. It pairs a Johnson Ranger transmitter and Courier amplifier with a Hammarlund HQ-145C receiver, courtesy of Kenneth Goodwin, K5RG, a JSARC member.

“This station will be used to make CW, SSB, and AM QSOs,” Keith Brandt, WD9GET, said. “In addition, our other shack radios will use SSB, FT8, FM, CW, and SSTV to make contacts on all bands.”

A special 60th anniversary QSL card — designed by AB5SS — will be available with an SASE for contacts made only to JSC Amateur Radio Club, 2101 NASA Rd. 1 M/C AW7, Houston, TX 77058. A certificate is available for top stations that work modes and bands across the NOTA NASA centers.

..... ARRL News, July 2018

## RRL Board of Directors' Committee Seeks Input for Proposed ARES Strategic Plan

Following up on an ARRL Board of Directors directive at its July meeting, the Public Service Enhancement Working Group (PSEWG) has contacted all ARRL Section Managers (SMs) and Section Emergency Coordinators (SECs) seeking comments and suggestions regarding the proposed [ARES Strategic Plan](#), via an online form. The deadline is October 31, in order to give the PSEWG sufficient time to review the comments and suggestions, formulate any necessary revisions, and submit the revised document to the Board for consideration at its January meeting.

Created in 1935, ARES has undergone very few changes over the years, while the agencies ARES serves have undergone many. The PSEWG evaluated the ARES program for 2 years and drafted several proposed enhancements aimed at updating the program.

The *ARES Strategic Plan* introduces changes and a platform for future growth. For many, this will represent a major paradigm shift; for others, it will formalize many of the requirements they have employed routinely for several years.

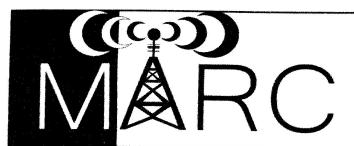
An independent team of individuals experienced in ARES and emergency work from across the US has reviewed the proposed plan. Their suggestions and recommendations were carefully considered, and many were included in the plan during its development.

Now, the ARRL Board wants SMs and SECs to have the opportunity to offer comments on the recommended changes prior to implementation of the plan. While SMs and SECs are invited to reach out to their Emergency Coordinators (ECs) for their thoughts and feedback, formal responses must be submitted through SMs and SECs.

The PSEWG asks SMs and SECs to keep their comments respectful, concise, and on point, and to keep in mind that the ARES framework must remain as close to universal as possible, even while participants in some geographical areas may require specific training that others do not need. Mutual aid pacts may require training specific to adjacent jurisdictions.

Also, SMs and SECs are reminded that specific agency agreements and needs must be honored. Those having concerns about a proposed new policy are requested to offer alternatives.

..... *ARRL News, August 2018*



# 10 Meters -- The Forgotten Band?

Is 10 meters the forgotten band? I was recently visiting my brother who is an avid CB'r. On the weekend I was with him, there was all types of skip on the 11meter band. If you are not aware, this was once an amateur radio band. With QRP power he was working stations all over the United States and Canada. His QTH is S.W. Idaho. If 11 meters was open, I knew 10 meters should be open too. I turned on my radio, scanned the band and heard nothing. I called CQ for about 10 minutes and heard received no reply.

It seems to be that everyone thinks that due to this last solar cycle the 10 meter band is dead. True, it has not been as good as the past. I earned my license in 1997 and 10 meter was wide open. I made many US and DX contacts using no more than 25 watts. My first HF radio was the Radio Shack HTX-100. It was all a Tech Plus needed then for great 10-meter QSO's.

During a recent DX contest, I made many contacts on 10 meters while mobile. When the contest was over, the band went quiet. No not dead, just quiet. Why is this band only checked for openings on a contest weekend now? Let's start checking 10 meters for QSO's. Go to the band and call CQ. Go up to the band and listen. You might just get some great contacts.

Kelly Blackmon  
NA5XX

..... *eHam.net August 2018*

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## New FCC Part 95 Personal Radio Services Rules Published in The Federal Register

Reorganized and updated FCC Personal Radio Services (PRS) Part 95 rules have been published in *The Federal Register*. Among other things, the PRS covers the Family Radio Service (FRS), General Mobile Radio Service (GMRS), and the Citizens Band Radio Service (CBRS).

The revised rules allot additional FRS channels and increase the power on certain FRS channels from 0.5 W to 2 W. FRS channels are in the 462.5625 – 462.7250 MHz range.

Effective September 30, 2019, it will be illegal to manufacture or import handheld portable radio equipment capable of operating under FRS rules and under other licensed or licensed-by-rule services. The FCC no longer will certify FRS devices that incorporate capabilities of GMRS capabilities or of other services. Existing GMRS/FRS combination radios that operate at power levels of less than 2 W ERP will be reclassified as FRS devices; existing GMRS/FRS radios that operate above that power level will be reclassified as GMRS devices, requiring an individual license. Radios that can transmit on GMRS repeater input channels will continue to be licensed individually and not by rule.

Once the new rules are effective, CBers will be allowed to contact stations outside of the FCC-imposed — but widely disregarded — 155.3-mile distance limit. .... *ARRL News August 2018*

## **UP – COMING ACTIVITIES AND HAMFESTS**

**08/18/2018** – 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

**08/25/2018** – 0930 - 1600 Greenwood Community Band Festival Serina Park Greenwood

**09/08/2018** – Time TBA Heartnut Festival Johnson County Park

**09/15/2018** – 1100 MARC Monthly meeting at the Steve Brown (N9LC) Ranch Franklin

**10/20/2018** – 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

**11/17/2018** – 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

**12/15/2018** – 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

**01/19/2019** -- 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

## **CLUB DUES FOR 2018**

**It** is that time of year to pay your dues for the Mid-State Amateur Radio Club.

The dues are still \$18.00 and they have remained that amount for many years.  
This also a good time to update any of your information for club records such as licence  
upgrade, change of address or call sign.

This is also a good opportunity for new amateurs to join our club and be part of  
our club activities.

Please see Ron, K9THR or Jacki, KI6QOG  
*M.A.R.C. Treasurer*



## MID-SATE AMATEUR RADIO CLUB

The Mid-State Amateur Radio Club meets the THIRD SATURDAY of each month at the Johnson County REMC 750 International Drive Franklin, IN 46131.

See our website, [www.midstatehams.org](http://www.midstatehams.org), for maps on how to get to our meeting.

Everyone is welcome; you do not have to be a *HAM* to attend our meetings or a member of the club.

**WA9RDF Repeater:**

146.835/  
146.235 MHz  
(151.4 Hz PL Tone)

**Club Officers:**

President: Jacki Frederick – KI6QOG  
Vice President: Ron Schuetz -K9THR  
Secretary: Rhonda Curtis – WS9H  
Treasurer: Ron Scheutz – K9THR /  
Jacki Frederick – KI6QOG  
Repeater Trustee - Chris Frederick – KQ9Y

**WA9RDF Repeater:**

443.525/  
448.525 MHz  
(151.4 Hz PL Tone)

**Weekly Net: Sunday evening 7:00 PM ARES/RACES members and ALL RADIO AMATEURS**  
**146.835/146.235 MHz (151.4 Hz PL Tone)**

**The Official Newsletter of the Mid-State Amateur Radio Club**

P.O. Box 836  
Franklin, Indiana  
46131

**Spark Gap Editor: Robert LaGrange N9SIU**

*Please send your articles to my email: [n9siu@yahoo.com](mailto:n9siu@yahoo.com) no later than the 3rd of the month*



*Special thanks to Johnson County REMC for the use of their community room for meetings and testing.*